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**Remarks**

In view of the above amendments to the claims and the following discussion, the applicants submit that the claims now pending in the application are not anticipated under the provisions of 35 U. S. C. § 102. Furthermore, all claims now pending in the application satisfy the requirements of 35 U. S. C. § 112. Thus, the applicants believe that all of these claims are in allowable form.

**REJECTIONS**

A. 35 U. S. C. § 112

1. Claims 1-12

Claims 1-12 stand rejected under 35 U. S. C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, with regard to claim 1, the Examiner indicates that the phrase "it" in the preamble should be rewritten as "the system". Applicants have amended claim 1 to replace the term "it" with the phrase "the system"

In view of the above amendment to claim 1, the basis for the Examiner's rejection of claims 1-12 under 35 U. S. C. § 112, second paragraph has been removed. Therefore, it is respectfully requested that this rejection be withdrawn.

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## B. 35 U. S. C. § 102

## 1. Claims 1-12 are not anticipated by Sharp et al.

Claims 1-12 stand rejected under 35 U. S. C. § 102(b) as being anticipated by Sharp et al. (U. S. Patent 6,273,571 issued August 14, 2001). The applicants submit that these claims are not anticipated by this reference.

Claim 1 is directed to a system for displaying images with the aid of a spatial light modulator. This system includes a light source emitting an illumination beam (see, specification at page 10, lines 33-34), a spatial light modulator having a matrix of pixels (see, specification at page 10, lines 35-38) that are controlled by video control signals corresponding to a succession of image frames to be displayed, a matrix filter formed of a mosaic of adjacent elementary filters of various colors (see, specification at page 10, line 38 up to page 11, line 3 as well as lines 11-14 and FIGS. 2 and 5f), that are illuminated by the illumination beam and that transmit a spatially filtered color beam to the spatial light modulator, a means for producing an image of said filter on an entrance face of the spatial light modulator (see, "transmission optics 4" in specification at page 11, lines 5-8) and means of displacement for displacing this image of the filter on the entrance face of the spatial light modulator and a device for controlling these means of displacement (see, specification at page 11, line 26 to page 12, line 29), making it possible to control at least one sequence of displacements of the image of the filter during each image frame.

Sharp et al. discloses a system for displaying images with the aid of a spatial light modulator. In Sharp et al., this system includes a light source emitting an illumination beam (see, Sharp et al. at FIG. 1b, element 1012), a spatial light modulator comprising a matrix of pixels (see, Sharp et al. at FIG. 1b, element 1024) that are controlled by video control signals corresponding to a succession of image frames to be displayed, a filter (see, Sharp et al. at FIG. 20, element 10a-c+20a-c+30a-c) that is illuminated by the illumination beam and that

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transmits a spatially filtered color beam to the spatial light modulator.

The filter of Sharp et al. is preferably a multistage filter (see, Sharp et al. at column 22, lines 20-33, line 60 – “three stage filter of FIG. 20” and column 25, line 54) using filter stages in series (see, Sharp et al. at column 23, line 7 and column 25, lines 1-2), contrary to the invention as claimed in claim 1 where the (elementary) filters are adjacent (then not in series). The filter of Sharp et al. is also called a “spectral sequencer” that is made of stacked (=> not adjacent) sequencing units (“The spectral sequencer 1018 is shown in Sharp et al. at FIGS. 3a-3c as having three sequencing units 1018a, 1018b and 1018c” : end of column 10). In FIGS. 3a-3c, each sequencing unit comprises a single-pixel modulator (see, Sharp et al. at column 11, line 3), but in FIGS. 4b-4c, “the filter is implemented with a multi-pixel LCD” (see, Sharp et al. at column 15, line 30) then providing implicitly a mosaic of adjacent elementary filters (see, Sharp et al. at column 26, lines 22-23).

Sharp et al. does not disclose means for producing an image of the filter on an entrance face of the spatial light modulator. In contrast, Sharp et al. at column 9, lines 42-45, to which the Examiner refers, only mentions different architectures of the system with different positions of the filter; there is no mention in Sharp et al. of explicit production of an image of the filter on an entrance face of the spatial light modulator.

Additionally, Sharp et al. does not disclose means of displacement for displacing the image of the filter on the entrance face of the spatial light modulator and does not disclose a device for controlling such means of displacement. Although “the filters can be placed in several positions within the display system” (see, Sharp et al. at column 4, lines 49-50, that is more detailed in column 9, lines 49-55 and in column 11, lines 9-13), such positions cannot change during displaying operation of the system as in the claimed invention. Moreover, as stated in Sharp et al. at column 21, line 19-20, there is “no mechanism for inducing color shift”, contrary to the embodiments of the invention as claimed in claim 1.

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Sharp et al. at column 11, lines 1-4, concerns the control of the different sequencing units of the filter (state of the "single pixel" included in each unit), and does not concern a displacement (i.e. a movement implying a change of position) of such sequencing units. Furthermore, Sharp et al. at column 12, lines 41-51, to which the Examiner refers, concerns "rotatable retarders", where the term "rotation" concerns the change of direction of polarization and does not relate to a physical movement of an optical component or, at least, of an image. Consequently, as claim 1 is not described in Sharp et al., claim 1 is patentable over Sharp et al.

Claims 2-12 depend directly or indirectly from claim 1. For the same reasons as stated above for claim 1, claims 2-12 are also patentable over Sharp et al.

More precisely with regard to claim 2, the dimensions and the position of each elementary filter are adapted so that the image of each of them on the entrance face of the spatial modulator covers a plurality of pixels. Sharp et al. at column 4, lines 47-55, to which the Examiner refers, concerns the different positions of the filters according to different architecture, but does not concern the "coverage" of a plurality of pixels of the spatial modulator (imager) but the image of any elementary filter of the filter.

Further, claim 3 recites that each displacement of a sequence corresponds to a multiple of the dimension of the image of an elementary filter on the entrance face of the spatial modulator. Sharp et al. at column 4, lines 47-55, to which the Examiner refers, concerns the different positions of the filters according to different architecture, but does not concern the amplitude of displacement of the filter during displaying operations.

Claim 8 recites that each sequence of displacements of the image of the filter on the entrance face of the spatial light modulator allows the successive illumination of each pixel of the spatial light modulator by all the elementary filters of one and the same block. Although the elements R, G, B of the filter of FIG. 20 of Sharp et al. allow the successive illumination of each pixel of the spatial light

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modulator by all the elementary sequencing units of this filter, such an illumination is not obtained by a sequence of displacement of the image of the filter on the entrance face of the spatial light modulator as in the claimed invention but is obtained by the control of the state (implying no displacement of images) of the different LCD 10a, 10b, 10d that are stacked (i.e. not adjacent) in this filter.

Regarding claim 9 which recites that, during each image frame, each pixel of the spatial light modulator is illuminated successively by all the elementary filters of a first block under the effect of a first sequence of displacements, then by all the elementary filters of at least one second block under the effect of at least one second sequence of displacements. Although in Sharp et al. it is stated at column 26, lines 27-29, that in the filter having multiple pixel arrays, "each pixel can be controlled independently via an independent applied voltage", such a statement does not imply using two different sequences of displacements during each image frame.

Finally, regarding claims 10-12, the Examiner refers to the same excerpt of Sharp et al. (column 26, lines 22-32) that does not mention any claimed white or not-white colorimetry at the entrance face of the spatial light modulator as required by the claims. Consequently, such an excerpt cannot anticipate these claims.

### CONCLUSION


Thus, the applicants submit that none of the claims, presently in the application are anticipated under the provisions of 35 U. S. C. § 102. Furthermore, all claims now pending in the application satisfy the requirements of 35 U. S. C. § 112. Consequently, the applicants believe that all of the claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

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If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Ms. Patricia A. Verlangieri, at (609) 734-6867, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

  
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